



# Falcon Refinery Progress Report

- Disposed of over 3 million gallons of hazardous waste
- Recycled over 16,000 gallons of crude oil
- Characterized and disposed of over 50 abandoned drums
- Disposed of 40 yds<sup>3</sup> of oily waste

# Falcon Refinery Progress Report

- Secured the site
- Established project office and defined exclusion zones
- Obtained utilities
- Conducted asbestos survey
- Obtained site safety equipment and trained on-site personnel
- Cleared and grubbed



# Falcon Refinery Progress Report

- Gauged tanks and did compatibility testing
- Established the project website [www.falcon-refinery.com](http://www.falcon-refinery.com)
- On-site lab and offices were cleared of waste and debris
- Equipment was purchased to allow efficient loading of hazardous waste



# Falcon Refinery Progress Report

- Coordinated all disposal facilities and shipments with the EPA
- Sampled "grossly stained soil"
- Prepared a proposal to construct a Land Treatment Unit to remediate hydrocarbon impacted soil
- Solicited bids to "pig" and evacuate pipelines associated with the facility

# Falcon Refinery Progress Report

- Performed demolition of North Site pump station
- Recycled metal that was not associated with waste
- Attended the Scoping Meeting
- Attended the Community Involvement Meeting
- Submitted the RI/FS Workplan















































Cleaned out west control room

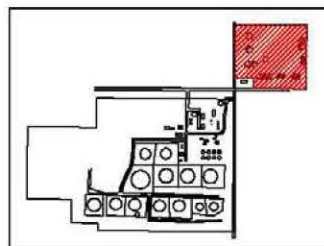






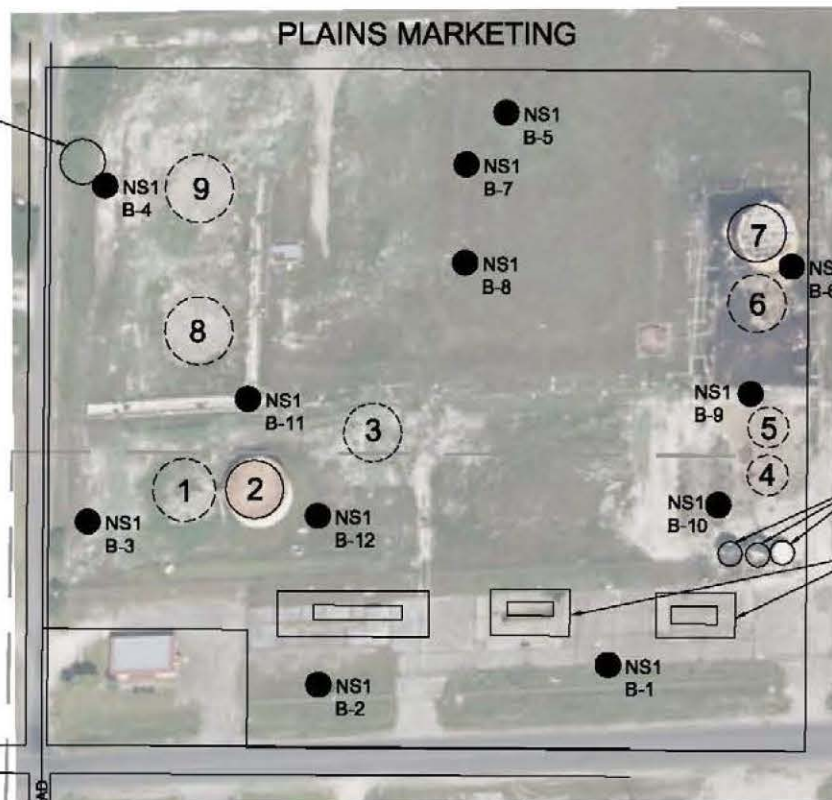


# PROPOSED NORTH SITE BORING LOCATIONS



LOCATION MAP  
N.T.S.

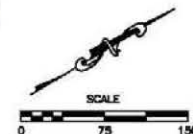
HALF-BURIED  
CONCRETE TANK



PLAINS MARKETING

SMALL TANKS: 1, 2, 3

FORMER FUEL OIL &  
CRUDE OIL LOADING  
RACKS



● PROPOSED BORING LOCATION

TANK #	SIZE	TOTAL CAPACITY	NOTES
1	1,000	-	GAS, DIESEL OILS, 69 % FUEL
2	1,000	-	PH > 12.5 LIGHT OIL
3	-	-	UNKNOWN
4	-	-	2" PARAFIN BASED OIL SLUDGE
5	-	-	EMPTY
6	-	-	3" PARAFIN BASED OIL SLUDGE
7	10,000	10,000	HAZ LEAD
8	20,000	-	EMPTY - 97 % WATER
9	20,000	-	EMPTY



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DATE

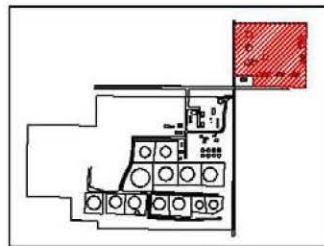
APPROVED  
BNC OWNER  
SCALE  
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NORCO  
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INGLESIDE, SAN PATRICIO COUNTY, TEXAS  
FIGURE 5 - PROPOSED NORTH SITE BORING  
LOCATIONS

JOB NO.

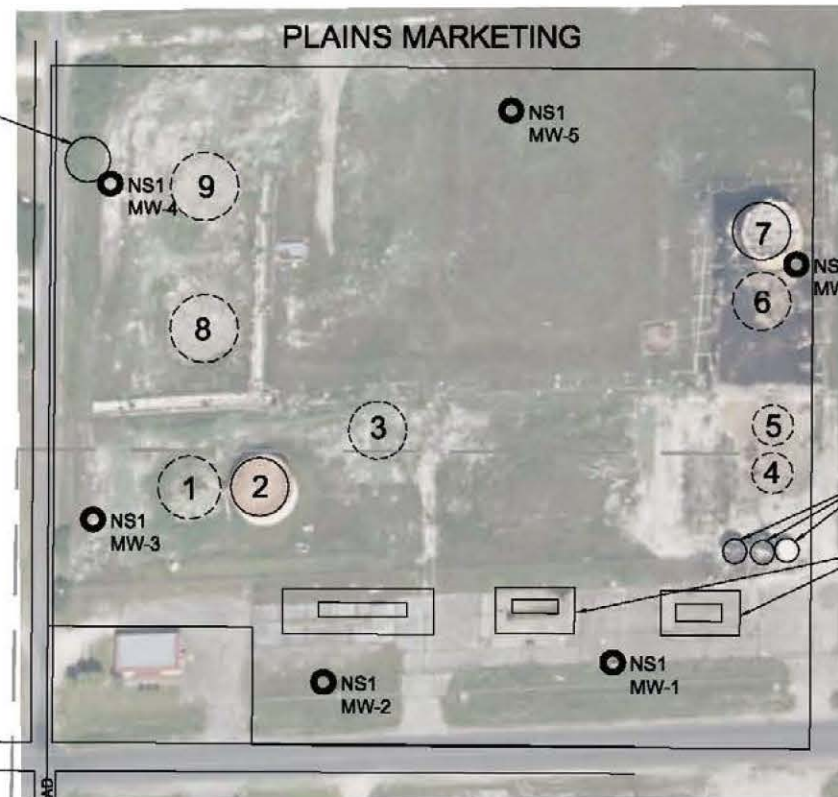
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# **PROPOSED NORTH SITE MONITOR WELL LOCATIONS**



LOCATION MAP  
N.T.S.

HALF-BURIED  
CONCRETE TANK



PLAINS MARKETING

SMALL TANKS: 1, 2, 3

FORMER FUEL OIL &  
CRUDE OIL LOADING  
RACKS

○ - PROPOSED MONITOR WELL LOCATION

TANK #	SIZE	TOTAL CAPACITY	NOTES
1	1,000	-	GAS, DIESEL OILS, 69 % FUEL
2	1,000	-	PH > 12.5 LIGHT OIL
3	-	-	UNKNOWN
4	-	-	2" PARAFIN BASED OIL SLUDGE
5	-	-	EMPTY
6	-	-	3" PARAFIN BASED OIL SLUDGE
7	10,000	10,000	HAZ LEAD
8	20,000	-	EMPTY - 97 % WATER
9	20,000	-	EMPTY



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BNC

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DATE

DATE

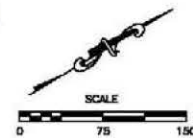
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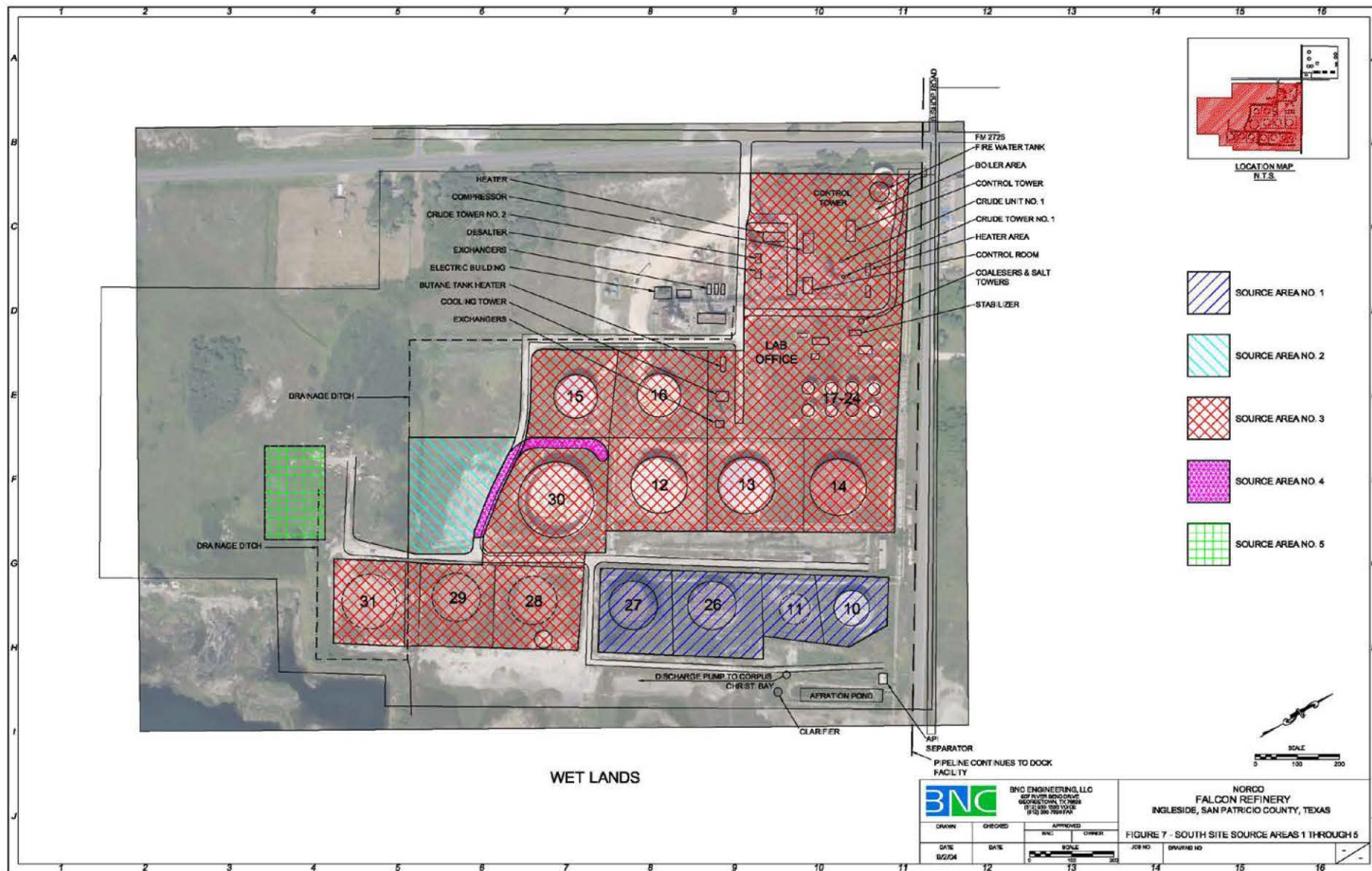
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**FIGURE 6 - PROPOSED NORTH SITE MONITOR WELL  
LOCATIONS**

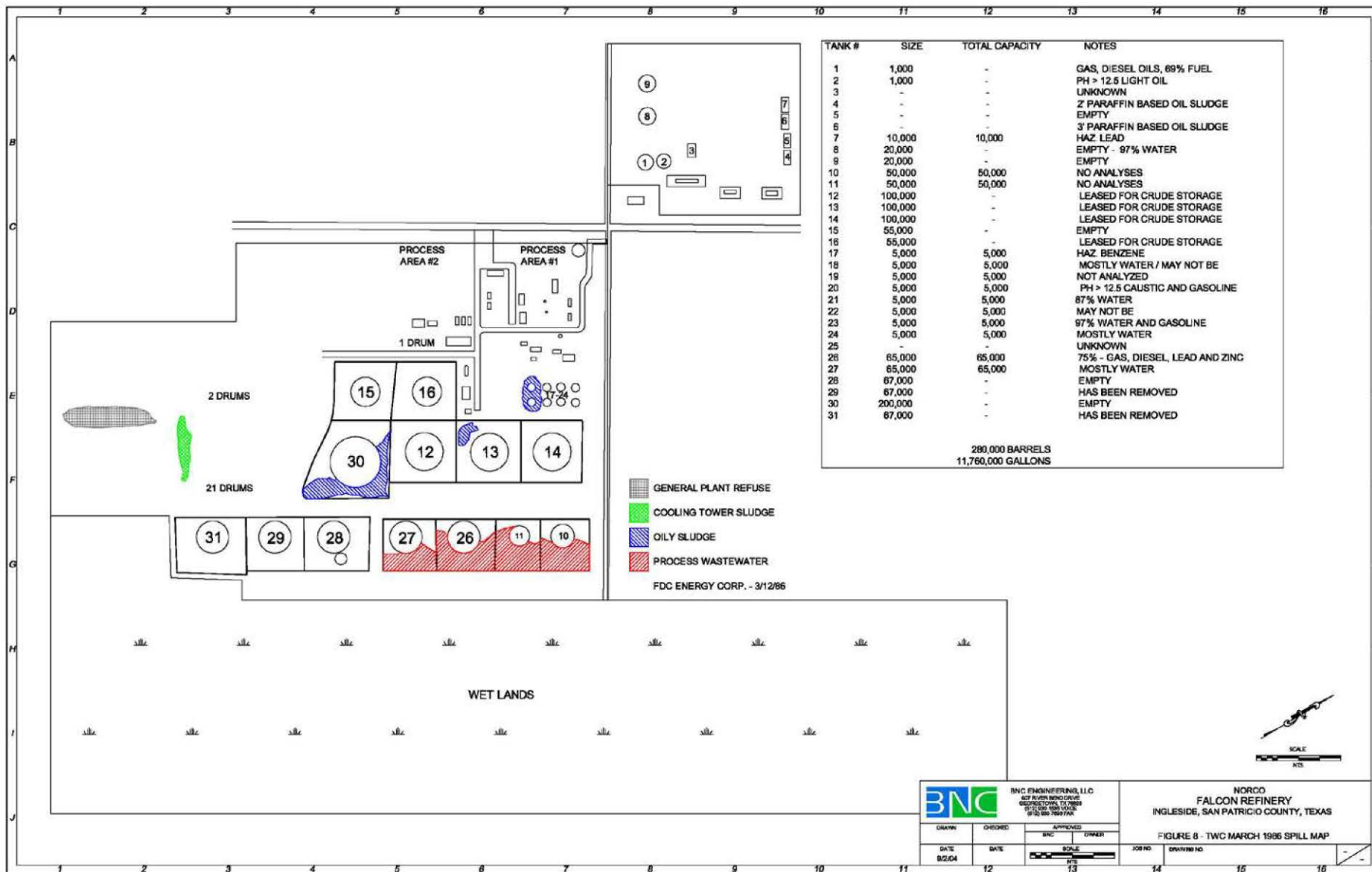
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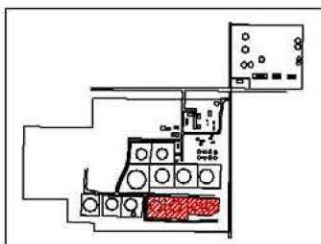




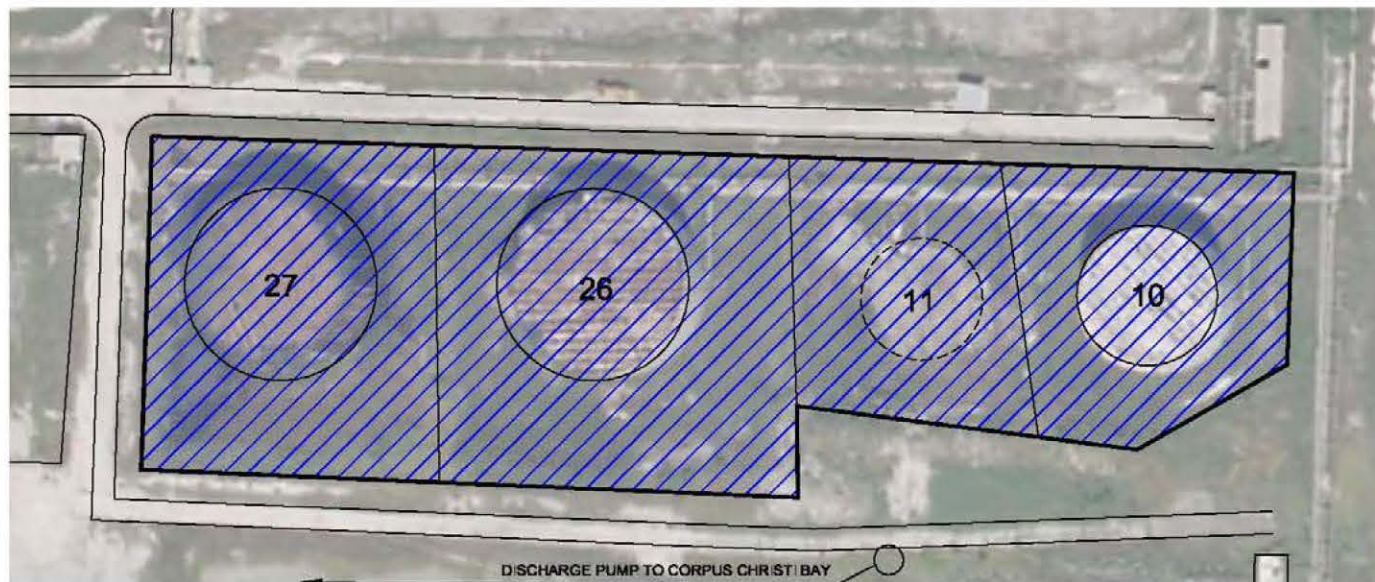




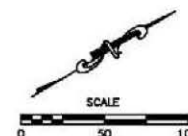
# HRS SOURCE AREA 1 SOIL SAMPLING RESULTS



LOCATION MAP  
N.T.S.



SOURCE AREA NO. 1



## HRS SOURCE AREA NO. 1 SAMPLING DATA

HAZARDOUS SUBSTANCE	SAMPLE S0-18	SAMPLE S0-22	SAMPLE S0-23	TOTAL SOIL COMB. RESIDENTIAL (ALL VALUES mg/Kg)
CHRYSENE	0.085J	2.0J	4.8	560.0
ARSENIC	1.1J	7.7	0.78	34.0
CHROMIUM	2.1	83.2J	2.0J	970.0
COPPER	8.5	64.2J	1.3J	550.0
MANGANESE	106.0	271J	101J	3,400.0
NICKEL	1.4J	57.5J	1.5J	24,000.0



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BNC

OWNER

DATE

DATE

SCALE

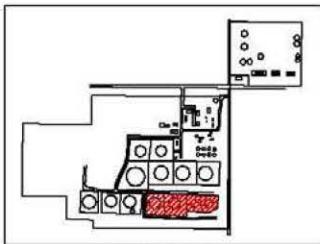
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FIGURE 9 - HRS SOURCE AREA 1 SOIL SAMPLING  
RESULTS

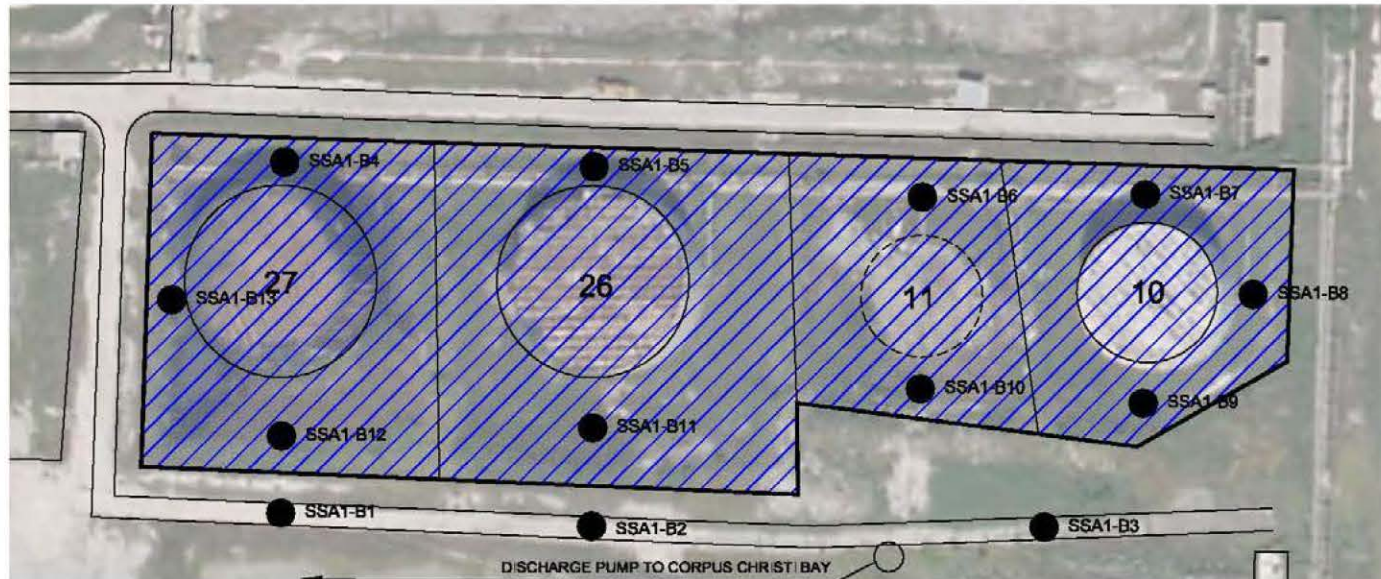
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DRAWING NO.

# **PROPOSED SOUTH SITE SOURCE AREA 1** **SOIL BORING LOCATIONS**



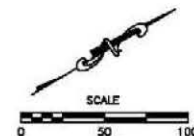
LOCATION MAP  
N.T.S.



SOURCE AREA NO. 1



PROPOSED BORING LOCATION



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DATE	DATE	BNC	OWNER
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		0 50 100	

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INGLESIDE, SAN PATRICIO COUNTY, TEXAS  
**FIGURE 10 - PROPOSED SOUTH SITE SOURCE AREA 1  
SOIL BORING LOCATIONS**

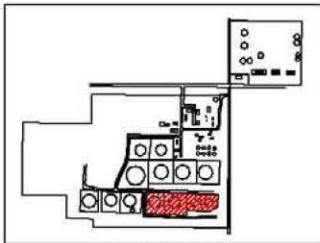
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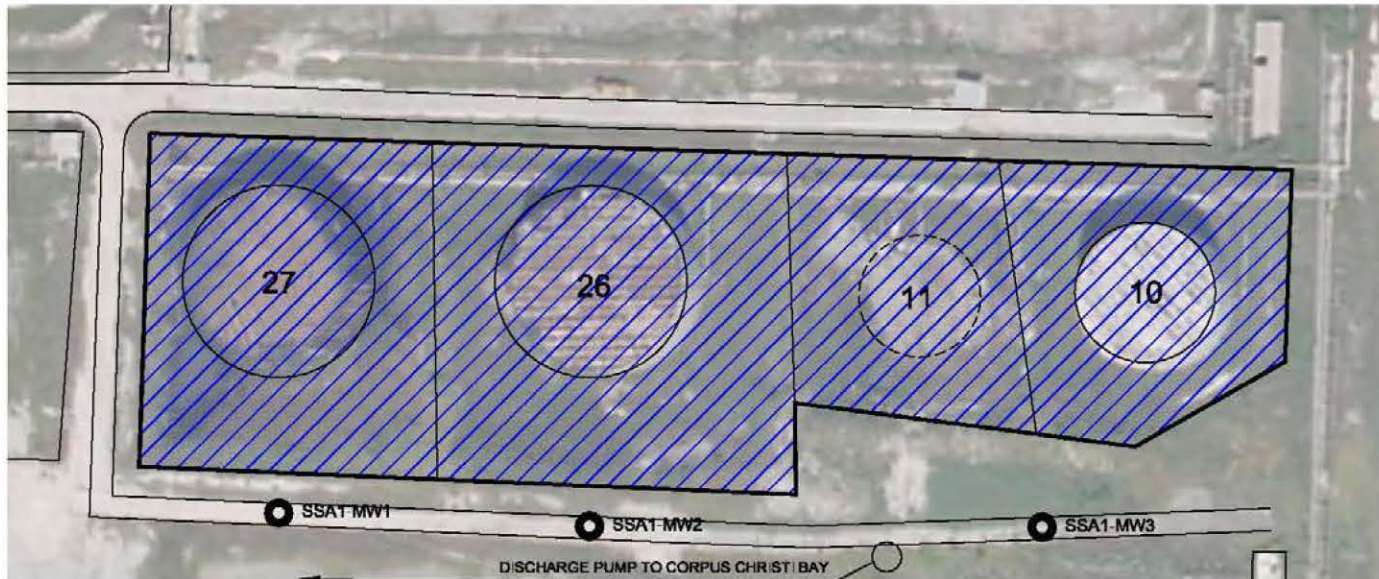
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# **PROPOSED SOUTH SITE SOURCE AREA 1** **MONITOR WELL LOCATIONS**



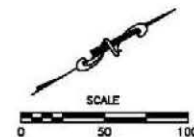
LOCATION MAP  
N.T.S.




SOURCE AREA NO. 1



PROPOSED MONITOR WELL LOCATION



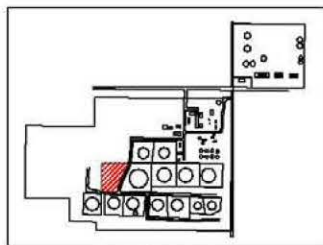
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		DRAWN DATE 9/2/04	CHECKED DATE
		SCALE 	

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**FIGURE 11 - PROPOSED SOUTH SITE SOURCE AREA 1  
 MONITOR WELL LOCATIONS**

JOB NO.

DRAWING NO.

# HRS SOURCE AREA 2 SOIL SAMPLING RESULTS



LOCATION MAP  
N.T.S.

DRAINAGE DITCH



SOURCE AREA NO. 2

## HRS SOURCE AREA NO. 2 SAMPLING DATA

HAZARDOUS SUBSTANCE	SAMPLE SO-28	TOTAL SOIL CONB. RESIDENTIAL (ALL VALUES mg/kg)
FLOURANTHENE	0.470	2,300.0
PYRENE	0.490	1,700.0
BENZO(a)ANTHRACENE	0.370	5.70
CHRYSENE	0.580	5.60
BENZO(b)FLOURANTHENE	0.990	5.70
BENZO(k)FLOURANTHENE	0.600	5.00
BENZO(a)PYRENE	0.740	0.56
INDENO(1,2,3-cd)PYRENE	0.560	1,600.0
BENZO(g,h,i)PERYLENE	0.610	1,600.0



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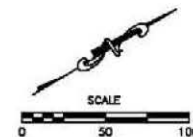
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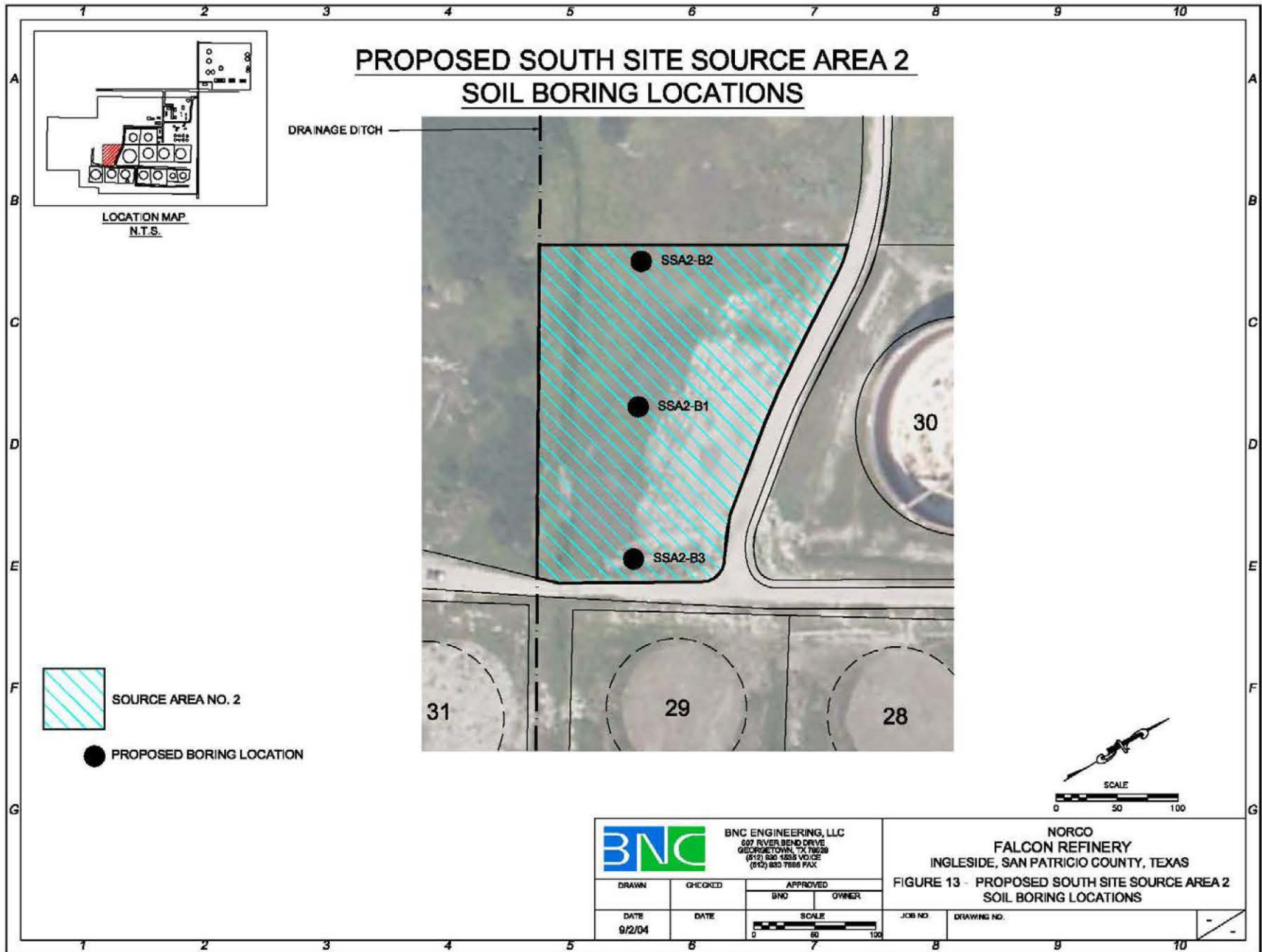
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INGLESIDE, SAN PATRICIO COUNTY, TEXAS  
FIGURE 12 - HRS SOURCE AREA 2 SOIL SAMPLING  
RESULTS

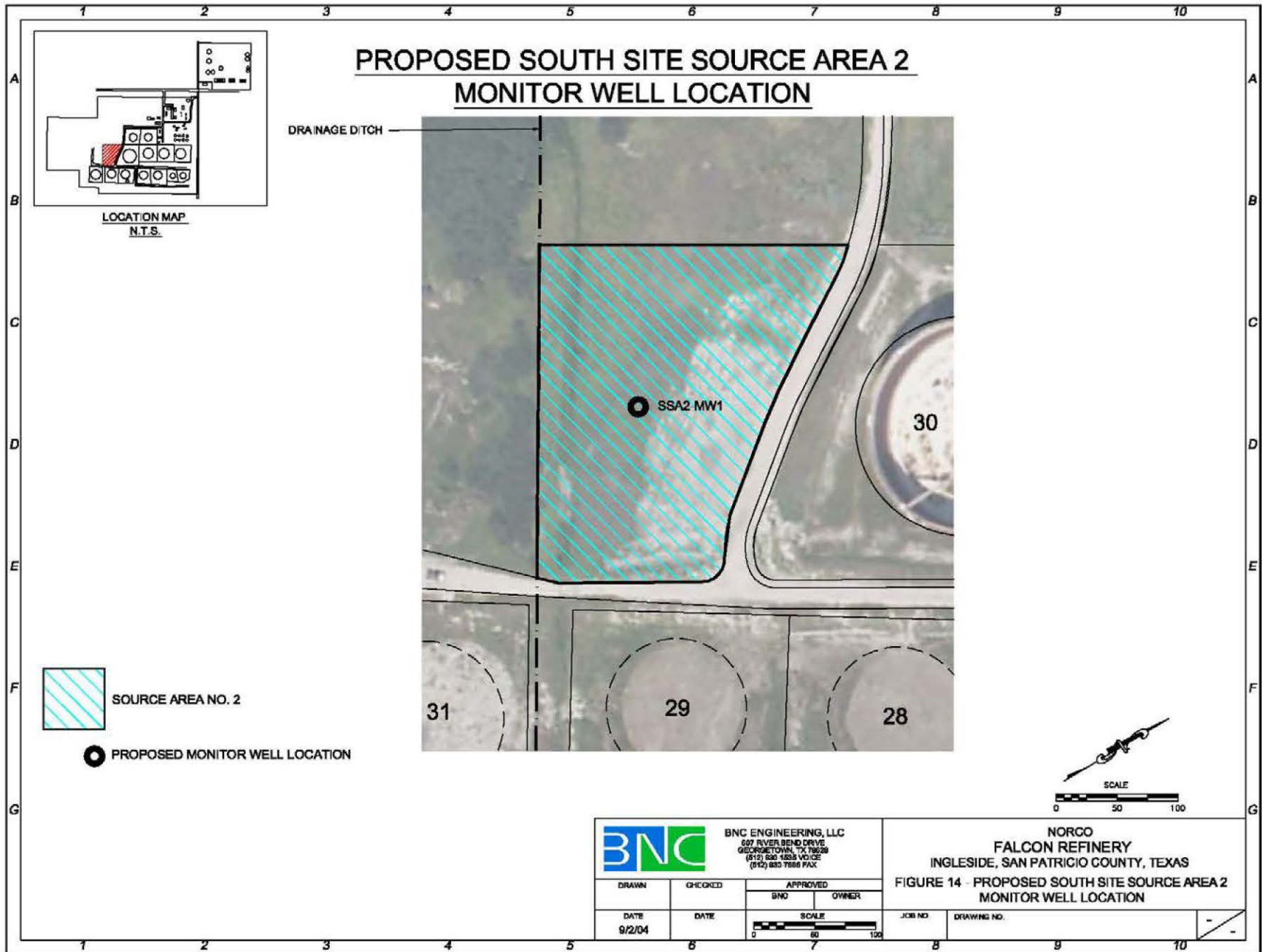
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DRAWING NO.











# HRS SOURCE AREA 3 SOIL SAMPLING RESULTS



**HRS SOURCE AREA NO. 3 SAMPLING DATA**

HAZARDOUS SUBSTANCE	SO-11	SO-12	SO-13	SO-14	TOTAL SOIL CONCS. RESIDENTIAL (ALL VALUES mg/ Kg)
CHRYSENE	47.3	ND	N/A	ND	550.0
ALUMINUM	3,590	1,630	795	2,470	65,000
ARSENIC	1.02	2.52	ND	0.552	24.0
BARIUM	122	1,040	47.0	55.7	2,500
CHROMIUM	5.5	23.5	2.5	2.5	970
COFFER	5.5	49.7	3.5	1.2	550
LEAD	50.4	200	230	28.5	500
MANGANESE	145	59.5	43.4	101	3,400
MERCURY	0.072	0.15	0.06	ND	2.1
NICKEL	3.5	7.5	0.72	1.52	24,000
THALLIUM	ND	0.74	ND	ND	5.3
VANADIUM	9.0	15.7	2.1	4.5	280
ZINC	89.5	291	155	12.5	9,500

**SOURCE AREA NO. 3 SAMPLING DATA**

HAZARDOUS SUBSTANCE	SO-15	SO-17	SO-30	SO-33	TOTAL SOIL CONCS. RESIDENTIAL (ALL VALUES mg/ Kg)
CHRYSENE	ND	ND	ND	2.5	550.0
ALUMINUM	1,810	1,33	1.5	5.5	65,000
ARSENIC	4.52	1.52	1.5	5.5	24.0
BARIUM	145	135	135	47.5	2,500
CHROMIUM	31.5	4.5	5.0	25.5	970
COFFER	30.5	5.5	5.0	50.2	550
LEAD	124	15.5	9.2	31.5	500
MANGANESE	72.5	155	22.5	155	3,400
MERCURY	0.085	0.055	0.07	0.05	2.1
NICKEL	42.7	2.5	3.7	14.1	24,000
THALLIUM	5.5	5.0	ND	5.5	5.3
VANADIUM	5.5	7.0	5.5	5.5	280
ZINC	44.4	35.2	42.5	43.5	9,500

**SOURCE AREA NO. 3 SAMPLING DATA**

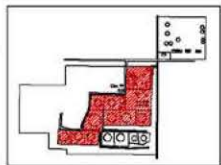
HAZARDOUS SUBSTANCE	SO-02	DUP	SO-55	SO-15	TOTAL SOIL CONCS. RESIDENTIAL (ALL VALUES mg/ Kg)
CHRYSENE	N/A	N/A	N/A	ND	550.0
ALUMINUM	445	551	545	1,150	65,000
ARSENIC	ND	ND	ND	0.512	24.0
BARIUM	21.5	25.7	25.5	175	2,500
CHROMIUM	1.7	1.5	1.7	2.5	970
COFFER	1.42	1.3	1.7	2.4	550
LEAD	254	155	25.5	11.3	500
MANGANESE	171.1	15.5	25.7	124	3,400
MERCURY	0.054	0.055	0.054	ND	2.1
NICKEL	0.33	0.15	0.24	1.5	24,000
THALLIUM	ND	ND	ND	ND	5.3
VANADIUM	0.55	0.55	1.3	5.5	280
ZINC	155	155	15.5	12.7	9,500



<b>BNC</b>		BNC ENGINEERING, LLC 607 RIVER WIND DRIVE CORPUS CHRISTI, TX 78408 (512) 865-7600 FAX	
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DATE	DATE	SCALE	JOB NO.
02/04			01471550 NO.

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FIGURE 15 HRS SOURCE AREA 3 SOIL SAMPLING RESULTS

# PROPOSED SOUTH SITE SOURCE AREA 3 SOIL BORING LOCATIONS



LOCATION MAP  
N.T.S.

● PROPOSED BORING LOCATION



SOURCE AREA NO. 3



<b>BNC</b>		<b>BNC ENGINEERING, LLC</b> 607 BYRON WINDCREEK GEORGETOWN, TX 78626 (512) 866-1600 FAX (512) 866-1607 FAX	
DRAWN DATE 8/2/04	CHECKED DATE	APPROVED BNC DATE	DRAWN SCALE 1" = 100'
JOB NO. 041199		DRAWING NO. 16	

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 FIGURE 16 - PROPOSED SOUTH SITE SOURCE AREA 3  
 SOIL BORING LOCATIONS



# PROPOSED SOUTH SITE SOURCE AREA 3 MONITOR WELL LOCATIONS



LOCATION MAP  
N.T.S.

● PROPOSED MONITOR WELL LOCATION



SOURCE AREA NO. 3

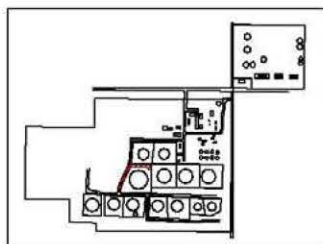


BNC ENGINEERING, LLC  
607 AVON ROAD  
CORPUS CHRISTI, TX 78408  
(361) 666-1600  
WWW.BNCENGINEERING.COM

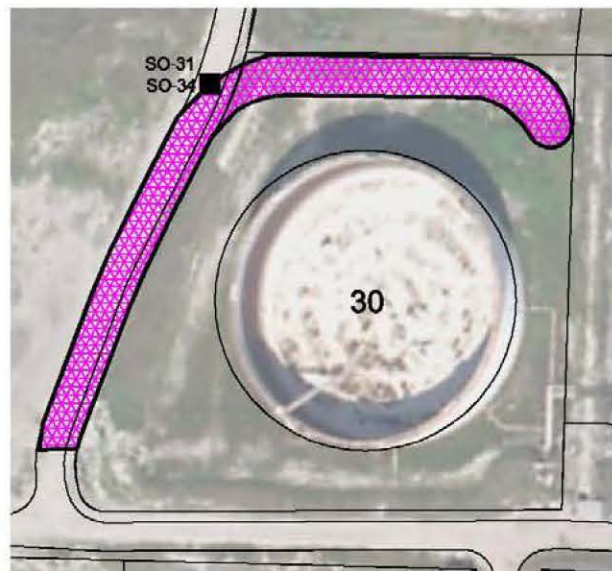
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DATE	DATE	SCALE	JOB NO.
8/2/04		1" = 100'	0411189-00

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FIGURE 17 - PROPOSED SOUTH SITE SOURCE AREA 3  
MONITOR WELL LOCATIONS

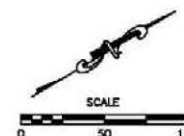
# HRS SOURCE AREA 4 SOIL SAMPLING RESULTS



LOCATION MAP  
N.T.S.



SOURCE AREA NO. 4



HRS	SOURCE AREA NO. 4		SOIL SAMPLES
HAZARDOUS SUBSTANCE	SO-26	SO-34 DUP.	TOTAL SOIL COMB. RESIDENTIAL (ALL VALUES mg/Kg)
LEAD	19	25.1	500
ZINC	40.3	40.9	9,900



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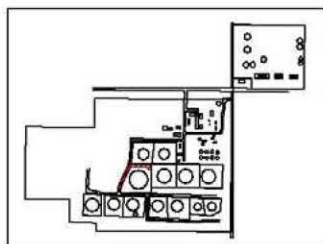
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DATE	DATE	BNC	OWNER
9/2/04		SCALE 0 50 100	

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INGLESIDE, SAN PATRICIO COUNTY, TEXAS  
FIGURE 18 - HRS SOURCE AREA 4 SOIL SAMPLING  
RESULTS

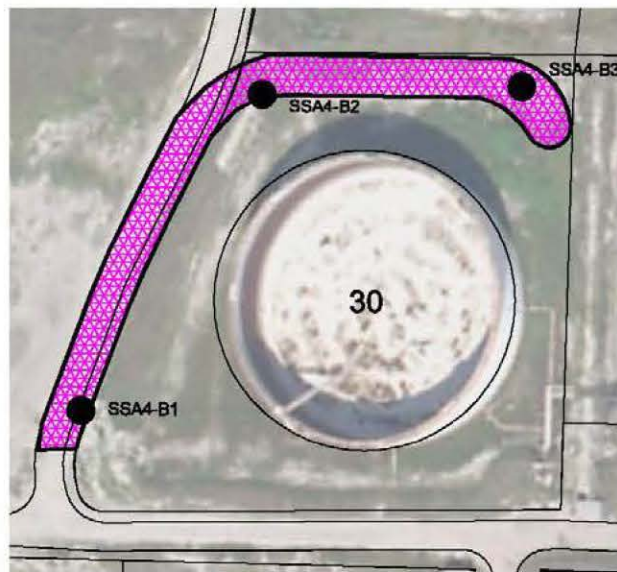
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# **PROPOSED SOUTH SITE SOURCE AREA 4 SOIL BORINGS LOCATIONS**



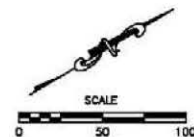
LOCATION MAP  
N.T.S.



SOURCE AREA NO. 4



PROPOSED BORING LOCATION



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(512) 533-7558 FAX

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DATE

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BNC OWNER  
SCALE  
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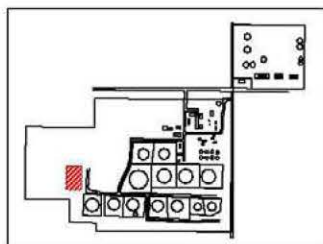
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INGLESIDE, SAN PATRICIO COUNTY, TEXAS

FIGURE 19 - PROPOSED SOUTH SITE SOURCE AREA 4  
SOIL BORING LOCATIONS

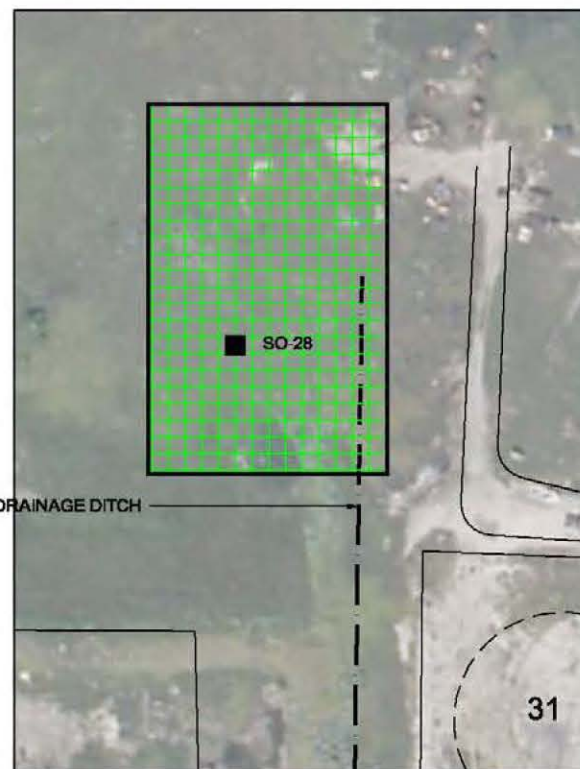
JOB NO.

DRAWING NO.

# HRS SOURCE AREA 5 SOIL SAMPLING RESULTS



LOCATION MAP  
N.T.S.



SOURCE AREA NO. 5

## SOURCE AREA NO. 5

HAZARDOUS SUBSTANCE	SAMPLE SO-28	TOTAL SOIL CONC. RESIDENTIAL (ALL VALUES mg/Kg)
ALUMINUM	4,810	65,000.0
ARSENIC	23.3	34.0
PYRENE	3.9	1,700
CADMIUM	1.3	52.0
CHRYSENE	8.5	560.0
CHROMIUM	67.5	970.0
COPPER	75.6	590.0
LEAD	30.5	500.0
MANGANESE	434	3,400.0
NICKEL	49.7	24,000
SELENIUM	2.5	310.0
THALLIUM	10.5	6.3
VANADIUM	14.5	290.0
ZINC	81.1	9,900.0



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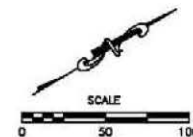
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JOB NO.

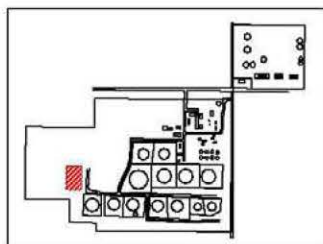
DRAWING NO.



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FALCON REFINERY  
INGLESIDE, SAN PATRICIO COUNTY, TEXAS  
FIGURE 20 - HRS SOURCE AREA 5 SOIL SAMPLING  
RESULTS



# **PROPOSED SOUTH SITE SOURCE AREA 5 SOIL BORING LOCATIONS**



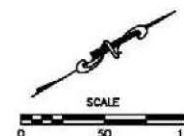
LOCATION MAP  
N.T.S.



SOURCE AREA NO. 5



PROPOSED BORING LOCATION




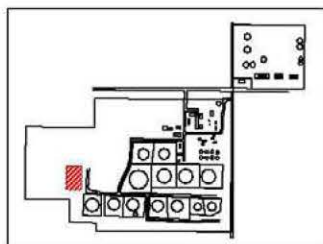
		BNC ENGINEERING, LLC 607 RIVER BEND DRIVE GEORGETOWN, TX 78626 (512) 840-1523 VO/CE (512) 833-7888 FAX		NORCO FALCON REFINERY INGLESIDE, SAN PATRICIO COUNTY, TEXAS	
		DRAWN DATE 9/2/04	CHECKED DATE	APPROVED BNC SCALE 0 50 100	OWNER DRAWING NO.

FIGURE 21 - PROPOSED SOUTH SITE SOURCE AREA 5  
SOIL BORING LOCATIONS

# **PROPOSED SOUTH SITE SOURCE AREA 5 MONITOR WELL LOCATION**



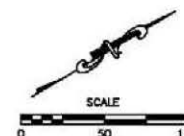
LOCATION MAP  
N.T.S.



SOURCE AREA NO. 5



PROPOSED MONITOR WELL LOCATION



		BNC ENGINEERING, LLC 607 RIVER BEND DRIVE GEORGETOWN, TX 78626 (512) 840 1528 VO/CE (512) 833 7888 FAX	
		DRAWN DATE 9/2/04	CHECKED DATE

NORCO FALCON REFINERY INGLESIDE, SAN PATRICIO COUNTY, TEXAS	
FIGURE 22 - PROPOSED SOUTH SITE SOURCE AREA 5 MONITOR WELL LOCATION	
JOB NO.	DRAWING NO.



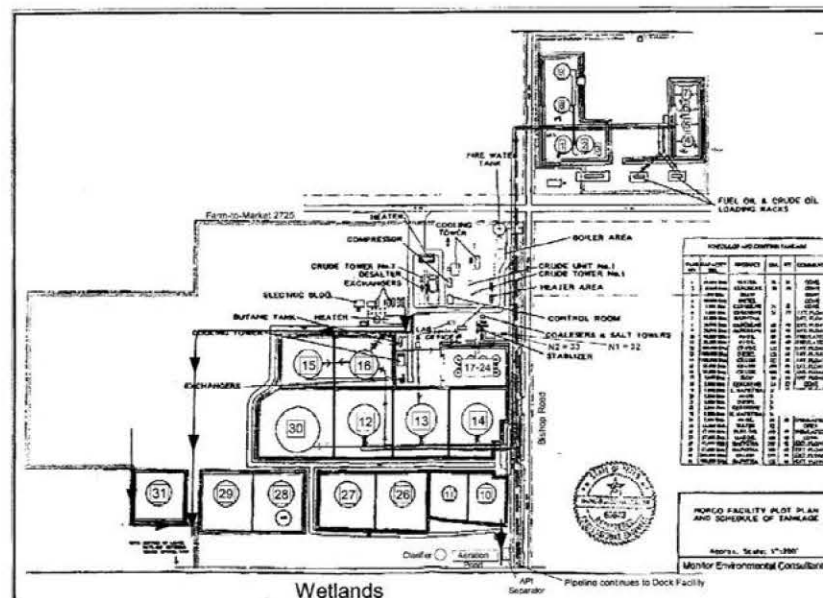
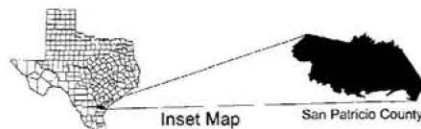


Figure 1c  
Site Detail Map

Falcon Refinery aka National Oil Recovery Corporation  
Ingleside, San Patricio County, Texas  
TXD 086 278 058



Legend

- ▶— Drainage Pathway No. 1
- ▶— Drainage Pathway No. 2
- ▶— Possible Drainage Pathway
- Pipeline



Protecting Texas by  
Reducing and  
Preventing Pollution

Page 5

Reference

Ref. 17, pp. 33-35



BNC ENGINEERING, LLC  
607 RIVER BEND DRIVE  
INGLESIDE, TEXAS 78640  
(512) 690-1000 VOICE  
(512) 690-7000 FAX

DRAWN	CHECKED	APPROVED
BNC	BNC	OWNER
DATE	DATE	DATE
9/2/04		

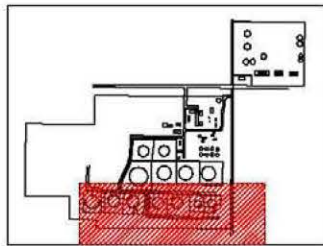
SCALE  
N.T.S.

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DRAWING NO.

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FALCON REFINERY  
INGLESIDE, SAN PATRICIO COUNTY, TEXAS  
FIGURE 23 - DRAINAGE PATHWAYS 1 AND 2

# HRS SEDIMENT SAMPLING RESULTS



LOCATION MAP  
N.T.S.



● SEDIMENT SAMPLING LOCATION

## SURFACE WATER PATHWAY - OBSERVED RELEASES FROM SEDIMENT SAMPLES COLLECTED FROM HRS DEFINED WETLANDS AND REDFISH BAY

SAMPLE NO.	SUBSTANCE	CONCENTRATION (mg/kg)	TCEQ SEDIMENT PCL's
SE-21	NOTHING DETECTED	N/A	N/A
SE-22	NOTHING DETECTED	N/A	N/A
SE-18	NOTHING DETECTED	N/A	N/A
SE-19	NOTHING DETECTED	N/A	N/A
SE-20	BARIUM	0.138	8,000
	MANGANESE	0.352	14,000
SE-21	CHRYSENE	0.560	1,800
	BENZO(G,H,I)PERYLENE	1.2	3,700



BNC ENGINEERING, LLC  
607 RIVER BEND DRIVE  
GEORGETOWN, TX 78626  
(512) 540-1555 VO/CE  
(512) 533-7588 FAX

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BNC

OWNER

DATE

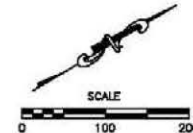
DATE

SCALE

0 50 100

JOB NO.

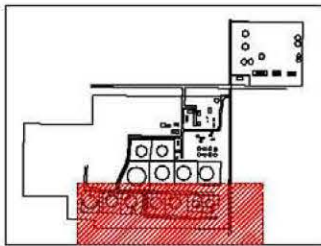
DRAWING NO.



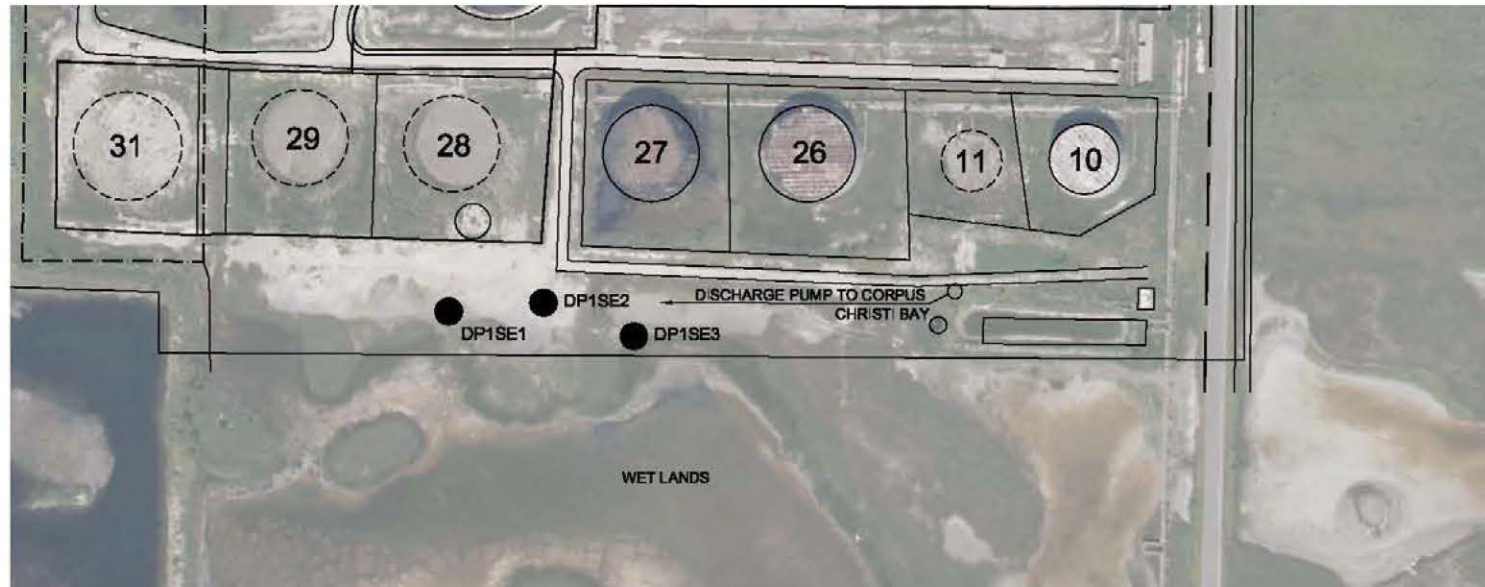
NORCO  
FALCON REFINERY  
INGLESIDE, SAN PATRICIO COUNTY, TEXAS  
FIGURE 24 - HRS SEDIMENT SAMPLING RESULTS



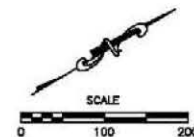
# **PROPOSED DRAINAGE PATHWAY 1 SEDIMENT SAMPLING LOCATIONS**




LOCATION MAP  
N.T.S.



● SEDIMENT SAMPLING LOCATION

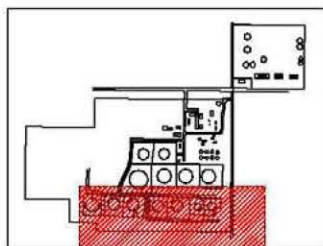


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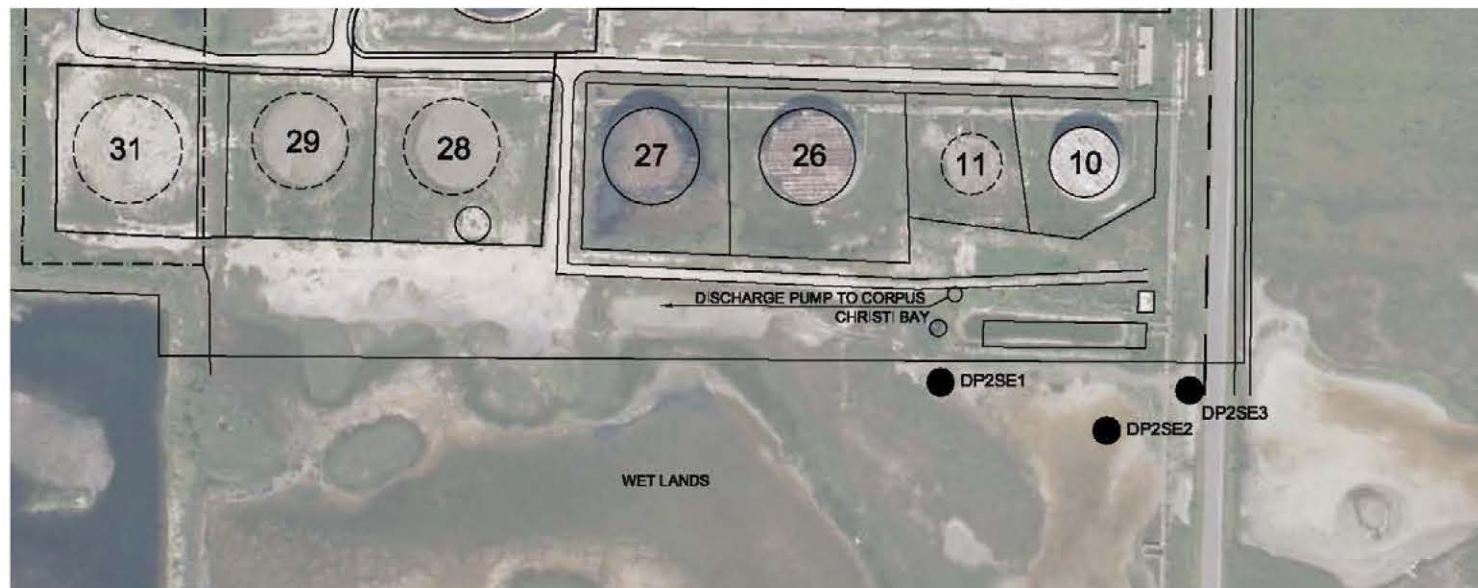
NORCO  
FALCON REFINERY  
INGLESIDE, SAN PATRICIO COUNTY, TEXAS  
FIGURE 25 - PROPOSED DRAINAGE PATHWAY 1  
SEDIMENT SAMPLING LOCATIONS

JOB NO.	DRAWING NO.	-
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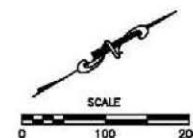
# **PROPOSED DRAINAGE PATHWAY 2 SEDIMENT SAMPLING LOCATIONS**



LOCATION MAP  
N.T.S.



● SEDIMENT SAMPLING LOCATION



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(512) 840-1555 VO/CE  
(512) 833-7888 FAX

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DATE  
9/2/04

CHECKED  
DATE

APPROVED  
BNC OWNER  
SCALE  
0 50 100

NORCO  
FALCON REFINERY  
INGLESIDE, SAN PATRICIO COUNTY, TEXAS  
FIGURE 26 - PROPOSED DRAINAGE PATHWAY 2  
SEDIMENT SAMPLING LOCATIONS

JOB NO.

DRAWING NO.





TANK #	SIZE	TOTAL CAPACITY	NOTES
1	1,000	-	GAS, DIESEL OILS, 89 % FUEL
2	1,000	-	PH > 12.5 LIGHT OIL
3	-	-	UNKNOWN
4	-	-	2' PARAFIN BASED OIL SLUDGE
5	-	-	EMPTY
6	-	-	3' PARAFIN BASED OIL SLUDGE
7	10,000	10,000	HAZ. LEAD
8	20,000	-	EMPTY - 97 % WATER
9	20,000	-	EMPTY
10	50,000	50,000	NO ANALYSES
11	50,000	50,000	NO ANALYSES
12	100,000	-	LEASED FOR CRUDE STORAGE
13	100,000	-	LEASED FOR CRUDE STORAGE
14	100,000	-	LEASED FOR CRUDE STORAGE
15	55,000	-	EMPTY
16	55,000	-	LEASED FOR CRUDE STORAGE
17	5,000	5,000	HAZ. BENZENE
18	5,000	5,000	MOSTLY WATER / MAY NOT BE
19	5,000	5,000	NOT ANALYZED
20	5,000	5,000	PH > 12.5 CAUSTIC AND GASOLINE
21	5,000	5,000	87 % WATER
22	5,000	5,000	MAY NOT BE
23	5,000	5,000	97 % WATER AND GASOLINE
24	5,000	5,000	MOSTLY WATER
25	-	-	UNKNOWN
26	65,000	65,000	75 % - GAS, DIESEL, LEAD AND ZINC
27	65,000	65,000	MOSTLY WATER
28	67,000	-	EMPTY
29	67,000	-	HAS BEEN REMOVED
30	200,000	-	EMPTY
31	67,000	-	HAS BEEN REMOVED

280,000 BARRELS  
11,760,000 GALLONS

● PROPOSED BORING LOCATIONS



BNC ENGINEERING, LLC  
407 RIVER BEND DRIVE  
HOUSTON, TEXAS 77057  
(281) 460-1000 FAX

NORCO  
FALCON REFINERY  
INGLESIDE, SAN PATRICK COUNTY, TEXAS  
FIGURE 27 - PROPOSED SOIL BORING LOCATIONS -  
ENTIRE FACILITY

DRAWN	CHECKED	APPROVED	OWNER
DATE	DATE	DATE	DATE
9/2/04			

JOB NO. DRAWING NO.



TANK #	SIZE	TOTAL CAPACITY	NOTES
1	1,000	-	GAS, DIESEL OILS, 89 % FUEL
2	1,000	-	PH > 12.5 LIGHT OIL
3	-	-	UNKNOWN
4	-	-	2' PARAFIN BASED OIL SLUDGE
5	-	-	EMPTY
6	-	-	3' PARAFIN BASED OIL SLUDGE
7	10,000	10,000	HAZ. LEAD
8	20,000	-	EMPTY - 97 % WATER
9	20,000	-	EMPTY
10	50,000	50,000	NO ANALYSES
11	50,000	50,000	NO ANALYSES
12	100,000	-	LEASED FOR CRUDE STORAGE
13	100,000	-	LEASED FOR CRUDE STORAGE
14	100,000	-	LEASED FOR CRUDE STORAGE
15	55,000	-	EMPTY
16	55,000	-	LEASED FOR CRUDE STORAGE
17	5,000	5,000	HAZ. BENZENE
18	5,000	5,000	MOSTLY WATER / MAY NOT BE
19	5,000	5,000	NOT ANALYZED
20	5,000	5,000	PH > 12.5 CAUSTIC AND GASOLINE
21	5,000	5,000	87 % WATER
22	5,000	5,000	MAY NOT BE
23	5,000	5,000	97 % WATER AND GASOLINE
24	5,000	5,000	MOSTLY WATER
25	-	-	UNKNOWN
26	65,000	65,000	75 % - GAS, DIESEL, LEAD AND ZINC
27	65,000	65,000	MOSTLY WATER
28	67,000	-	EMPTY
29	67,000	-	HAS BEEN REMOVED
30	200,000	-	EMPTY
31	67,000	-	HAS BEEN REMOVED

280,000 BARRELS  
11,760,000 GALLONS

● PROPOSED MONITOR WELL LOCATION



		BNC ENGINEERING, LLC 407 RIVER BEND DRIVE HOUSTON, TEXAS 77057 (281) 410-1000		NORCO FALCON REFINERY INGLESIDE, SAN PATRICK COUNTY, TEXAS	
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SCALE: [ ]		JOB NO. [ ]		DRAWING NO. [ ]	

FIGURE 28 - PROPOSED MONITOR WELL LOCATIONS - ENTIRE FACILITY



# Site Characterization Comments

- "EPA should purge outdated institutional patterns that reinforce antiquated habits"
- "EPA should use more effective, less costly approaches to assess and clean up contaminated sites"
- "Sampling policies should be driven by performance, rather than complying with arbitrary policies or procedural checklists that do not add value"

# Site Characterization Comments

- "Data not needed to inform specific site decisions will not be collected. Although this sounds elementary, the one size fits all approach used by many practitioners routinely collects costly data which are ultimately irrelevant to the projects outcome"




# Site Characterization Comments

- "Data collection is not an end in itself: it's purpose is to supply information"
- Comments by:  
Deana Crumbling  
USEPA Technology Innovation Office



- LEGEND
- SOURCE AREA DEMARCATION
  - - - SAMPLE GRID DEMARCATION
  - SAMPLE LOCATION



 <b>BNC ENGINEERING, LLC</b> 607 E. VICTORIA DRIVE GEORGETOWN, TEXAS 75220-1902 972.266.7874		NORCO FALCON REFINERY INGLESIDE, SAN PATRICK COUNTY, TEXAS	
DRAWN DATE 3/3/08	CHECKED DATE 12	APPROVED DATE 13	DRAWN DATE 14